

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

DRAFT SOCIOECONOMIC REPORT FOR Proposed Rule 1315—Federal New Source Review Tracking System

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EXECUTIVE SUMMARY

A socioeconomic analysis was conducted to assess the impacts of Proposed Rule (PR) 1315—Federal New Source Review Tracking System. A summary of the analysis and findings is presented below.

Elements of Proposed Rule	PR 1315 would allow the AQMD to continue to issue permits based on the Priority Reserve of Rule 1309.1 and/or the offset exemptions of Rule 1304. PR 1315 memorializes the procedures for establishing equivalency with the federal NSR requirements and provides safeguards to ensure that sufficient offsets are available in the AQMD's internal bank and to ensure air emission impacts do not exceed those analyzed in the CEQA document.
Affected Facilities and Industries	<p>Sources that are qualified to seek access to the Priority Reserve include innovative technology, research operations, and essential public services. Essential public services include sewage treatment facilities, prisons, police and fire fighting facilities, schools, hospitals, landfill gas control or processing facilities, water delivery operations, and public transit.</p> <p>Sources that are exempt from the offset requirements include various types of equipment as well as replacement equipment; relocation; concurrent facility modifications; projects for resource conservation, resource recovery, and regulatory compliance; and new and modified facilities with permitted emissions less than the specified thresholds, etc.</p> <p>Sources eligible for the Priority Reserve and the offset exemptions are from all the sectors of the four-county economy.</p>
Assumptions of Analysis	<p>Implementation of PR 1315 would allow the AQMD to continue to issue permits to the sources under Rules 1309.1 (Priority Reserve) and 1304 (Exemptions), consistent with the growth assumptions used for the 2007 Air Quality Management Plan (AQMP). As such, the baseline economic forecast used for the socioeconomic assessment of the 2007 AQMP incorporated the impact of PR 1315 (See p. 4 for a description of the baseline forecast used for this analysis). PR 1315 is a growth-accommodating rule for new and modified sources. Therefore, the analysis of PR 1315 was based on projected growth of individual industries.</p> <p>Estimated changes in concentrations of either ozone, PM_{2.5}, or both from the proposed rule relative to concentration changes in the 2007 AQMP were used to assess the forgone air quality benefits due to PR 1315.</p>

Compliance Costs	PR 1315 is not expected to generate additional compliance costs since it allows the AQMD to continue its current offset exemption for Rules 1304 and 1309.1 sources.
Economic Impacts	<p>Allowing eligible sources to have access to the AQMD internal offsets as allowed by PR 1315 would be expected to result in more than 1.86 million jobs, an increase of over 2.11 million people, and a gain of more than \$283 billion of gross regional product (GRP) to the local economy in 2030, as compared to the conditions without the proposed rule. These translate to increases in employment, population, and GRP by 16.1 percent, 9.7 percent, and 20.5 percent, respectively, as compared to the conditions without the proposed rule. As stated above, these growth projections have been incorporated in the 2007 AQMP. However, it is not certain whether all the anticipated population increase would be avoided without the proposed rule since population increase is based on births and migration.</p> <p>The emissions from sources permitted in reliance upon the internal offset accounts tracked under PR 1315 translate into forgone air quality benefits of \$1.2 billion in 2030, 76 percent of which are health benefits.</p>
Impacts of CEQA Alternatives	<p>There are five CEQA Alternatives. Alternative A—No Project Alternative—would restrict growth for certain industries to the 2010 levels. Compared to PR 1315, more than 1.86 million jobs would be forgone, population would be reduced by more than 2.11 million people, and GRP would decrease by more than \$283 billion in 2030. Alternative A would have an extreme impact on the local economy.</p> <p>Under Alternative B large businesses would pay offset fees even if their emissions are less than four tons. The offset fees would make expansion, new development, and modernization in the region more expensive. Alternative C—Large Businesses Prohibited from Accessing Rule 1304 Exemptions—would create uncertainty for large businesses in terms of offset prices and quantities in the open market and for purposes of analysis, is projected to result in large businesses not being able to replace equipment or expand. Alternative D—Use of Credits Generated in 2009 and Beyond Only (as it limits small businesses as well as large businesses)—would create even a greater uncertainty (i.e., quantity and timing) than Alternative C for the long-term development of a business in light of today's high control efficiency, implementation of the Best Available Control Technology, and fluctuation and delayed availability of shutdown credits. This alternative is projected to allow only replacement of existing equipment, no expansion, or no new facilities since all offsets would come from reductions or shutdown of existing sources. Alternative E would cap the growth</p>

	<p>to one-half of the 2007 AQMP amount.</p> <p>Alternatives B through E are projected to result in reduction in job growth. Such reduction is expected to be the least for Alternative B because of its similarity to PR 1315.</p> <p>Limited growth from Alternatives A through E translates into fewer emission reductions forgone due to growth, thus benefiting air quality compared with assumptions in the 2007 AQMP. Alternative A has the highest air quality benefit as it has the toughest limit on growth. Alternative B is projected to have the least air quality benefit of all the alternatives to the proposed rule.</p>
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INTRODUCTION

Proposed Rule 1315—Federal New Source Review Tracking System—would allow the AQMD to issue permits based on the Priority Reserve of Rule 1309.1 and/or the offset exemptions of Rule 1304. Without PR 1315, sources that would otherwise be qualified for offsets from the AQMD internal offset accounts would have to purchase Emission Reduction Credits (ERCs) from the open market in order to offset their emission increases. However, it is unlikely that a sufficient quantity of ERCs would be available to accommodate the growth projected in the 2007 Air Quality Management Plan (AQMP).

LEGISLATIVE MANDATES

The socioeconomic assessments at the AQMD have evolved over time to reflect the benefits and costs of regulations. The legal mandates directly related to the assessment of the proposed amendments include the AQMD Governing Board resolutions and various sections of the California Health & Safety Code (H&SC).

AQMD Governing Board Resolutions

On March 17, 1989 the AQMD Governing Board adopted a resolution that calls for preparing an economic analysis of each proposed rule for the following elements:

- Affected Industries
- Range of Control Costs
- Cost Effectiveness
- Public Health Benefits

On October 14, 1994, the Board passed a resolution which directed staff to address whether the rules or amendments brought to the Board for adoption are in the order of cost effectiveness as defined in the AQMP. The intent was to bring forth those rules that are cost effective first.

Health & Safety Code Requirements

The state legislature adopted legislation that reinforces and expands the Governing Board resolutions for socioeconomic assessments. H&SC Sections 40440.8(a) and (b), which became effective on January 1, 1991, require that a socioeconomic analysis be prepared for any proposed rule or rule amendment that "will significantly affect air quality or emissions limitations." Specifically, the scope of the analysis should include:

- Type of Affected Industries
- Impact on Employment and the Economy of the District
- Range of Probable Costs, Including Those to Industries
- Emission Reduction Potential
- Necessity of Adopting, Amending or Repealing the Rule in Order to Attain State and Federal Ambient Air Quality Standards
- Availability and Cost Effectiveness of Alternatives to the Rule

The analysis for PR 1315 projects that the rule will not increase costs compares to conditions without the rule. Therefore, some types of analysis are not applicable. For the necessity of rule adoption, please refer to the Staff Report for Proposed Rule 1315. Cost effectiveness is not relevant to the proposed rule since it does not require emission reductions. Similarly, the range of control costs is not applicable to this rule since it does not increase control requirements. Additionally, the AQMD is required to actively consider the socioeconomic impacts of regulations and make a good faith effort to minimize adverse socioeconomic impacts. H&SC Section 40728.5, which became effective on January 1, 1992, requires the AQMD to:

- Examine the type of industries affected, including small businesses; and
- Consider Socioeconomic Impacts in Rule Adoption

H&SC Section 40920.6, which became effective on January 1, 1996, requires that incremental cost effectiveness be performed for a proposed rule or amendment that imposes Best Available Retrofit Control Technology or “all feasible measures” requirements relating to ozone, carbon monoxide (CO), oxides of sulfur (SOx), oxides of nitrogen (NOx), and their precursors. Incremental cost effectiveness is defined as the difference in costs divided by the difference in emission reductions between one level of control and the next more stringent control. This analysis is not relevant since the rule is not a retrofit requirement or an “all feasible measures” requirement. The analysis focuses on the economic effects of the proposed rule and the alternatives, including the health dis-benefits of emission reductions forgone, as compared to conditions without PR 1315.

AFFECTED FACILITIES

Sources that are qualified for the Priority Reserve include innovative technology, research operations, and essential public services. Essential public services include sewage treatment facilities, prisons, police and fire fighting facilities, schools, hospitals, landfill gas control or processing facilities, water delivery operations, and public transit.

Sources that are exempt from the offset requirements include various types of equipment as well as replacement equipment; relocation; concurrent facility modifications; projects for resource conservation, resource recovery, and regulatory compliance; and new and modified facilities with permitted emissions less than the specified thresholds, etc.¹

Sources eligible for the Priority Reserve and the offset exemptions are in all the sectors of the four-county economy. It is too speculative to predict which individual sources would access the AQMD internal offset accounts. The socioeconomic analysis herein evaluates the impact of PR 1315 on the growth of industries.

Small Businesses

The AQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than \$500,000 in gross annual receipts. The AQMD

¹ The thresholds are four tons per year for VOC, NOx, SOx, and PM10; and 29 tons per year for CO.

also defines “small business” for the purpose of qualifying for access to services from the AQMD’s Small Business Assistance Office as a business with an annual receipt of \$5 million or less, or with 100 or fewer employees. In addition to the AQMD’s definition of a small business, the federal Small Business Administration (SBA), the federal Clean Air Act Amendments (CAAA) of 1990, and the California Department of Health Services (DHS) also provide definitions of a small business.

The SBA’s definition of a small business uses the criteria of gross annual receipts (ranging from \$0.5 million to \$25 million), number of employees (ranging from 100 to 1,500), megawatt hours generated (4 million), or assets (\$150 million), depending on industry type. The SBA definitions of small businesses vary by 6-digit North American Industrial Classification System (NAICS) code.

The CAAA classifies a facility as a “small business stationary source” if it: (1) employs 100 or fewer employees, (2) does not emit more than 10 tons per year of either VOC or NO_x, and (3) is a small business as defined by SBA.

The sources that would utilize the AQMD’s internal accounts in the future as a result of PR 1315 cannot be readily identified. As such, their small business status cannot be determined.

For Alternatives B and C in the Environmental Assessment of PR 1315, a business with an annual gross receipt of \$5 million or less, or a total number of employees below 100 is considered small (Small Business Assistance Office definition in Rule 102—Definition of Terms).

IMPACTS OF PR 1315

The growth impact from PR 1315 translates to additional employment, output, and population. On the other hand, emission increases from growth would forgo some of the air quality benefits, including health benefits that were projected for the 2007 AQMP.

Economic Impact

The REMI model (REMI, 2006) is used to assess the total socioeconomic impacts of a policy change (e.g., PR 1315). The model links economic activities in the 19 sub-areas that make up the counties of Los Angeles, Orange, Riverside, and San Bernardino. The REMI model for each sub-area is comprised of a five block structure that includes (1) output and demand, (2) labor and capital, (3) population and labor force, (4) wages, prices and costs, and (5) market shares. These five blocks are interrelated. Within each sub-area, producers are made up of 66 private non-farm industries, three government sectors, and a farm sector. Trade flows are captured between sectors as well as across the 19 sub-areas and the rest of U.S. Market shares of industries are dependent upon their product prices, access to production inputs, and local infrastructure. The demographic/migration component has 160 ages/gender/race/ethnicity cohorts and captures population changes in births, deaths, and migration.

The growth assumptions used for the 2007 AQMP were based on the Southern California Association of Governments’ socioeconomic projections for the region, which did not assume a

constraint on growth from an inability of the AQMD to issue permits to sources under Rules 1309.1 and 1304. As such, the baseline economic forecast used for the socioeconomic assessment of the 2007 AQMP incorporated the impact of PR 1315. The baseline economic forecast was based on future uncontrolled emissions, i.e., there would have been no further controls beyond those already adopted before the 2007 AQMP.

As shown in Table 1, the baseline economic forecast (including Rule 1315) projected an annual growth rate of 0.82 percent in employment, 0.85 percent in population, and 2.27 percent in gross regional product, respectively, from 2011 to 2030 within the four-county area of the AQMD jurisdiction. Table 2 shows the projected employment by key sector for 2011, 2014, 2023, and 2030.

Table 1
2007 AQMP Baseline Economic Forecast

Economic Variable	2011	2014	2023	2030
Employment (thousands)	9,895	10,217	10,980	11,565
Population (thousands)	18,589	19,149	20,725	21,841
GRP (billions in 2000 \$)	\$904	\$987	\$1,198	\$1,384

Table 2
Employment by Industry

Industry	NAICS	2011	2014	2023	2030
Forestry, Fishing, Other	113-115	20,178	20,168	19,457	18,510
Mining	21	8,148	7,811	7,358	7,237
Utilities	22	22,200	22,674	23,937	24,764
Construction	23	540,402	574,868	665,056	723,968
Manufacturing	31-33	736,087	711,924	719,032	728,417
Wholesale Trade	42	402,555	390,751	352,767	324,925
Retail Trade	44-45	1,014,780	1,028,262	1,005,258	981,691
Transportation & Warehousing	48-49	322,621	332,895	363,327	386,271
Information	51	309,165	311,281	305,021	306,046
Finance, Insurance	52	449,740	457,534	463,696	463,415
Real Estate, Rental, Leasing	53	441,402	453,728	474,208	479,518
Professional & Technical Services	54	758,806	790,209	882,890	961,152
Management of Companies & Enterprises	55	135,414	133,983	129,991	126,137
Administrative & Waste Services	56	785,570	835,487	960,895	1,053,402
Educational Services	61	219,003	236,575	284,688	330,432
Health Care & Social Assistance	62	1,021,296	1,135,133	1,478,855	1,781,952
Arts, Entertainment & Recreation	71	298,237	310,975	335,090	351,621
Accommodation & Food Services	72	682,915	704,646	717,302	720,809
Other Services	81	583,521	592,407	592,170	589,430
Government	92	1,111,192	1,135,060	1,172,495	1,182,157
Farm	111-112	31,334	30,228	26,444	23,512
Total		9,894,565	10,216,599	10,979,937	11,565,368

In order to analyze the impact of PR 1315, the industries that are likely to be affected by PR 1315 were identified, as shown in Table 3. Without the proposed rule, their growth (in terms of production) beyond 2010 is assumed to be restricted to the 2010 level. Additionally, without PR 1315, future shutdown credits returning to the AQMD internal offset accounts would not be allowed to be used. The shutdown effect was approximated by a percentage of the restricted growth that was calculated as the average ratio of shutdown credits returning to the AQMD to the total emissions of permitted sources absent PR 1315 for VOC, SO_x, and PM₁₀, respectively. VOC emissions serve as a proxy for process-oriented sources, SO_x for combustion sources, and PM₁₀ for sources with combustion and process characteristics. The average ratio was calculated for 2014, 2023, and 2030 and interpolated for interim years.

Table 3
No Growth Industries Beyond 2010 Without PR 1315

Industries	NAICS
Support activities for mining	213
Wood product manufacturing	321
Primary metal manufacturing	331
Fabricated metal product manufacturing	332
Machinery manufacturing	333
Computer and electronic product manufacturing	334
Electrical equipment and appliance manufacturing	335
Transportation equipment manufacturing	336
Furniture and related product manufacturing	337
Miscellaneous manufacturing	339
Food manufacturing	311
Beverage and tobacco product manufacturing	312
Textile & textile product mills	313-314
Apparel manufacturing	315
Leather and allied product manufacturing	316
Paper manufacturing	322
Printing and related support activities	323
Petroleum and coal products manufacturing	324
Chemical manufacturing	325
Plastics and rubber products manufacturing	326
Wholesale & retail trade	42, 44-45
Air transportation	481
Transit and ground passenger transportation	485
Scenic and sightseeing transportation; support activities	487-488
Publishing industries, except Internet	511
Motion picture and sound recording industries	512
Waste management and remediation services	562
Educational services	61
Ambulatory health care services	621
Hospitals	622
Nursing and residential care facilities	623
Accommodation	721
Repair and maintenance	811
Personal and laundry services	812

If these industries were allowed to grow as anticipated, they collectively would bring more than 1.86 million jobs, an increase of over 2.11 million people, and a gain of more than \$283 billion of gross regional product (GRP) to the local economy in 2030 (Table 4). These translate to increases in employment, population, and GRP by 16.1 percent, 9.7 percent, and 20.5 percent, respectively, as compared to the conditions without the proposed rule, under which it is assumed that this growth would not occur.

Table 4
Annual Economic Impact of Proposed Rule (Compared to Without PR 1315)

Variable	2011	2014	2023	2030
Employment (thousands)	144	564	1,325	1,857
Population (thousands)	30	264	1,256	2,111
Gross Regional Product (billions of 2000\$)	\$18	\$70	\$183	\$283

The detailed employment impact by sector by year is presented in Table 5. The entire four-county area is projected to gain more than 1.33 million jobs in 2023 and 1.86 million jobs in 2030, respectively. The majority of jobs gained would be in the industries of manufacturing, wholesale and retail trade, and health care and social assistance where growth is most affected by PR 1315.

Table 5
Annual Employment Impact of Proposed Rule by Sector by Year
(Compared to Without PR 1315)

Industry	NAICS	2011	2014	2023	2030
Forestry, Fishing, Other	113-115	-5	-8	-5	-5
Mining	21	2	69	141	161
Utilities	22	-24	-50	-80	-100
Construction	23	-508	-1,243	-2,150	-2,587
Manufacturing	31-33	12,860	64,230	185,963	258,449
Wholesale Trade	42	16,237	58,059	114,558	139,326
Retail Trade	44-45	44,170	154,378	293,278	370,306
Transportation & Warehousing	48-49	2,748	12,565	30,988	44,121
Information	51	11,012	35,093	67,808	87,391
Finance, Insurance	52	-494	-1,006	-1,623	-1,911
Real Estate, Rental, Leasing	53	-212	-469	-922	-1,189
Professional & Technical Services	54	-608	-1,320	-2,465	-3,269
Management of Companies & Enterprises	55	-127	-259	-379	-435
Administrative & Waste Services	56	210	1,590	2,880	3,413
Educational Services	61	6,541	26,450	58,875	90,038
Health Care & Social Assistance	62	39,281	166,858	482,921	751,422
Arts, Entertainment & Recreation	71	-126	-254	-370	-448
Accommodation & Food Services	72	3,900	14,150	26,103	31,181
Other Services	81	9,512	35,784	71,509	93,686
Government	92	-344	-674	-1,630	-2,219
Farm	111-112	0	0	0	0
Total		144,025	563,944	1,325,400	1,857,331

Forgone Air Quality Benefits

The forgone air quality benefits due to the proposed rule were estimated by scaling the estimated benefits from implementing the 2007 AQMP presented in the 2007 AQMP Socioeconomic Analysis. The benefit categories considered herein include morbidity and mortality, visibility, materials, and crops. The additional air quality benefits that could be achieved if PR 1315 were not adopted, beyond the benefits forecasted in the 2007 AQMO Socioeconomic Report, are projected to be valued at \$1.2 billion in 2030, 76 percent of which are health benefits, as shown in Table 6. The consequence of adopting PR 1315 is that additional health benefits would be forgone.

Table 6
Annual Forgone Benefit by Category by Year (in millions of 2000 dollars)

Category	2014	2023	2030
Ozone Mortality	\$42.1	\$70.5	\$121.5
Ozone Morbidity	5.1	8.5	14.7
PM Mortality	198.0	516.0	750.0
PM Morbidity	13.3	34.0	49.1
Visibility	52.4	157.9	270.3
Materials	5.8	12.5	19.1
Crops	0.8	1.4	2.3
Total	\$317.5	\$800.8	\$1,227.0

Specifically, estimated concentrations of either ozone, PM_{2.5} or both pollutants attributed to the proposed rule were calculated. The per incident values associated with mortality and morbidity presented in the 2007 AQMP Socioeconomic Analysis were directly applied to the number of cases of each health effect resulting from both PM_{2.5} and ozone exposure provided in the Program Environmental Assessment. The estimated impact on crop yield was based on estimated ozone exposure from the proposed rule, which was then scaled to the differential average ozone exposure projected between the 2023 baseline and controlled emissions scenarios. An approximate \$0.9 million per part per billion ozone exposure to crops was used. A similar approach, projected visual range miles reduced from the proposed rule, was used to estimate the impact on visibility. The analysis was based on an approximate \$575 million per mile visual range. It was assumed that the impact on materials was proportional to exposure from both ozone and PM_{2.5}. Specifically, a factor of \$3.1 million per part per billion ozone and \$53.4 million per microgram per cubic meter PM_{2.5} were applied to the concentrations calculated for the proposed rule.

CEQA ALTERNATIVES

Five alternatives to the proposed amendments have been identified in the Program Environmental Assessment prepared pursuant to the California Environmental Quality Act (CEQA). Alternative A is the No Project Alternative, which would not implement the proposed

rule. It is assumed that all new and modified sources that had access to the AQMD internal offset accounts would have to obtain ERCs from the open market. Otherwise, these sources would not be able to obtain permits from the AQMD and therefore would not be built or operated. Because sufficient ERCs are not likely to be available, Alternative A assumes no growth in the industries that receive permits under Rules 1304 and 1309.1.

Relative to PR 1315, Alternative B—Offset User Fees for Large Businesses—would require that large businesses under Rule 1304 pay for the use of offsets from the AQMD internal accounts. Alternative C—Large Businesses Prohibited from Accessing Rule 1304 Exemptions—would prohibit large businesses from accessing offsets under Rule 1304. Alternative D—Use of Credits Generated in 2009 and Beyond Only—would eliminate existing balances of the AQMD’s internal offset accounts, which would be funded only by credits generated beginning in 2009. Alternative E—Limited Offset Availability—would cap the emission increases at 50 percent of the 2007 AQMP allowable levels.

Assessment Methodology

The socioeconomic analysis for the No Project Alternative assumed that there would be no growth after 2010 for the industries identified in Table 3. The production (output) of these industries after 2010 would be set at the 2010 level and future shutdown credits returning to the AQMD banks would not be allowed to be used. The result of these two effects is that AQMD would not be able to issue permits pursuant to Rules 1304 and 1309.1.

The socioeconomic impact analysis of Alternative B was conducted qualitatively relative to the proposed rule due to their similarities in requirements except for the offset user fee for large businesses.

Both Alternatives A and D have restricted growth to the 2010 level for the industries identified in Table 3. However, relative to Alternative A, future shutdown credits would be allowed to be used under Alternative D.

Alternatives C and E would allow more growth than Alternative A. The additional growth was assessed by multiplying the ratio of emission increases from each of Alternatives C and E to those from Alternative A by the forgone production for each industry identified in Table 3 because of Alternative A. The ratio was an average from three pollutants, VOC, SO_x, and PM₁₀. VOC emissions serve as a proxy for process-oriented sources, SO_x for combustion sources, and PM₁₀ for sources with combustion and process characteristics. The average ratio was calculated for 2014, 2023, and 2030 and interpolated for interim years. Table 7 shows these ratios by alternative by year.

Table 7
Ratio of Emission Reductions Forgone Relative to Alternative A

Alternative	2014	2023	2030
Alternative C	0.880	0.856	0.845
Alternative E	0.647	0.591	0.569

Increases in air quality benefits, beyond those forecasted in the 2007 AQMP Socioeconomic Report, associated with Alternatives A through E were conducted in the same manner as for the proposed rule.

Assessment Results

As shown in Table 8, PR 1315 would restore job growth assumed in the 2007 AQMP. Relative to the condition without PR 1315, PR 1315 would result in growth of more than 1.8 million jobs in 2030. Another consequence of adopting PR 1315 is that additional air quality benefits (\$1.23 billion in 2030) would be forgone.

Table 8
Impact of PR 1315 Relative to Without PR 1315

	Job Impacts				Benefits (in millions dollars)		
	2011	2014	2023	2030	2014	2023	2030
PR 1315	144,370	564,618	1,327,031	1,859,550	-\$318	-\$801	-\$1,227

Table 9 shows a comparison of impacts of all the CEQA alternatives in terms of job impacts and air quality benefits. Alternatives A through E are projected to result in reduction in job growth compared to the baseline projections for the 2007 AQMP. Such reduction is expected to be the least for Alternative B because of its similarity to PR 1315. All the job growth resulting from PR 1315 would be lost under Alternative A, which would not implement PR 1315.

Limited growth from Alternatives A through E translates into fewer emission increases, thus benefiting air quality. Alternative A has the highest air quality benefit as it has the toughest limit on growth. Of the alternative B is projected to have the least air quality benefit.

Table 9
Impacts of CEQA Alternatives Relative to Baseline Economic Forecast of 2007 AQMP

Alternatives	Job Impacts				Benefits (in millions dollars)		
	2011	2014	2023	2030	2014	2023	2030
A	-144,370	-564,618	-1,327,031	-1,859,550	\$318	\$801	\$1,227
B	Slightly Less Than PR 1315				Similar to PR 1315		
C	-6,474	-162,132	-560,196	-897,174	\$27	\$103	\$170
D	-102,628	-407,403	-1,132,653	-1,680,027	\$175	\$616	\$994
E	-14,749	-268,751	-796,357	-1,210,786	\$88	\$306	\$497

Alternative A

The ability of affected sources to obtain offsets in the open market is very limited, based on the current and anticipated future offset availability in the market. This is because there would be few opportunities to generate offsets from new technologies beyond regulatory requirements in light of today's high control efficiency and implementation of the Best Available Control Technology (BACT).

Relative to baseline economic forecast for the 2007 AQMP, the No Project Alternative is projected to result in substantially lower growth in employment, population, and gross regional product. Specifically, in 2030 there would be over 1.86 million fewer jobs, a reduction of over 2.11 million people, and a loss of more than \$283 billion of GRP in 2030 compared to the baseline projections for the 2007 AQMP, which included conditions under PR 1315.

Alternative B

Alternative B would require that large businesses using offsets pay fees to the AQMD for the use of offsets from the AQMD internal accounts, resulting in the additional cost of doing business to these facilities. Large businesses with relatively small emissions (i.e., less than four tons of emissions) would have to pay offset fees. Offset fees would make expansion, new development, and modernization in the region more expensive. Alternatively, large businesses might decide to reduce the size of a project or pull a project completely. As a result, the projected growth under Alternative B would be less than under the proposed rule, but it is not possible to quantify the increment. The job impact of Alternative B would be closer to that of PR 1315 if few large businesses decide to pull back in light of offset costs.

Alternative C

Large businesses would be prohibited from accessing offsets from Rules 1309.1 or 1304 under Alternative C. These businesses would have to acquire offsets in the open market or these projects would not be built. There would be potential uncertainty on offset availability and prices. Or, large businesses would not pursue the planned investments. This report and the Program Environmental Assessment assume that, under Alternative C, there would be no growth of large businesses in the industries affected by PR 1315. Alternatives B and C bracket the range of potential outcomes if large businesses are charged fees for or denied access to the AQMD internal offset accounts. The actual outcome likely would not be at either end of the range, but the point within the range cannot be quantified.

Alternative D

Alternative D would allow only the use of internal offsets generated in 2009 and beyond. Offset balances prior to 2009 would be forfeited. As such, the internal offset access is more limited than Alternatives B and C for all businesses unless generation of offsets in the future increases to more than compensate for the loss of offset balances prior to 2009. However, significant control efficiency that we experience today along with the requirement that new sources implement the BACT means that the majority of future offsets would come from shutdowns, which would

require verification. Additionally, shutdown credits would fluctuate from year to year. The resulting uncertainty under Alternative D would make it difficult for businesses to do long-range planning. The business impacts under Alternative D could be more severe in early years while the AQMD internal offset account balances are being built up.

Alternative E

Job reduction from Alternative E (compared to the baseline projections for the 2007 AQMP) is expected to be less severe than from Alternatives A and D but more severe than those from Alternatives B and C. As with Alternatives A through D, Alternative E would generate air quality benefits beyond the benefits identified in the 2007 AQMP due to the limited growth.

RULE ADOPTION RELATIVE TO THE COST EFFECTIVENESS SCHEDULE

On October 14, 1994, the Governing Board adopted a resolution that requires staff to address whether rules being proposed for adoption are considered in the order of cost-effectiveness. The 2007 Air Quality Management Plan (AQMP) ranked, in the order of cost-effectiveness, all of the control measures for which costs were quantified. It is generally recommended that the most cost-effective actions be taken first. Proposed Rule 1315 is not a control measure in the 2007 AQMP. Therefore, implementation by cost-effectiveness does not apply.

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